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No. 88-309

IN THE

Supreme Court of the United States

October Term, 1988

STATE OF WYOMING,
Petitioner,

v.

UNITED STATES OF AMERICA, SHOSHONE TRIBE AND NORTHERN ARAPAHO TRIBE OF THE WIND RIVER INDIAN RESERVATION, et al.,
Respondents.

ON WRIT OF CERTIORARI TO
THE SUPREME COURT OF WYOMING

BRIEF OF AMICUS CURIAE SALT RIVER PROJECT AGRICULTURAL IMPROVEMENT AND POWER DISTRICT IN SUPPORT OF THE STATE OF WYOMING

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INTEREST OF AMICUS CURIAE

Amicus curiae Salt River Project Agricultural Improvement and Power District, hereinafter referred to as "the District," is a political subdivision of the State of Arizona, organized pursuant to ARIZ. REV. STAT. ANN. §§ 48-2301 to 48-2475.[1] By virtue of various contracts, the District and the Salt River Valley Water Users' Association operate the Salt River Project, a federal reclamation project authorized and constructed under the authority of the Reclamation Act of 1902, 32 Stat. 388 (codified as amended in scattered sections of 43 U.S.C.).

[1]Because the District is a political subdivision of the State of Arizona and this brief is sponsored by the authorized law officer of the District, consent to filing this brief was neither sought nor required under Rule 36.4, Rules of the Supreme Court of the United States.

The Salt River Project facilities impound the waters of the Salt River and the Verde River, tributaries of the Gila River, for storage and delivery to municipal, industrial and agricultural water users in the Salt River Valley in central Arizona. The Project is comprised of approximately 248,000 acres of land, 71,000 of which are currently in agricultural production. The remaining 177,000 acres include most of the metropolitan Phoenix area, where more than 1.8 million people presently reside. The water used on those acres serves primarily municipal, industrial and domestic purposes. Current projections indicate that the Salt River Project lands will be almost entirely urbanized by 2010.[2]

The District is a claimant in two major water rights adjudications pending in Arizona courts — the Gila River Adjudication, covering the central and southern portions of the state,[3] and the Little Colorado River Adjudication, covering the northern part of the state. The number of claims in these adjudications totals 60,850 in the Gila Adjudication and 10,858 in the Little Colorado Adjudication.[4] Without question, the most extensive claims in both of these adjudications have been advanced by or on behalf of fourteen Indian tribes. In the Gila Adjudication, for example, twelve Indian tribes, or the United States acting on their behalf, have claimed in excess of 3.3 million acre-feet annually of the flow of the Gila River and its tributaries.[5]

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[2]*See Ball v. James*, 451 U.S. 355 (1981), for an extended discussion of the Salt River Project.

[3]This adjudication is pending in the Maricopa County Superior Court. The jurisdictional issues arising from this case were presented to this Court in *Arizona v. San Carlos Apache Tribe of Arizona*, 463 U.S. 545, *reh'g denied*, 464 U.S. 874 (1983).

[4]*See* records of Arizona Department of Water Resources, as of July 1, 1988.

[5]*See* claim of the United States on behalf of the Fort Apache Indian Tribe, No. 39-07-12168; claims of San Carlos and Tonto Apache Indian tribes, Nos. 39-07-12676 and 39-05-50058; claim of Fort McDowell

Similarly, in the Little Colorado Adjudication, the Hopi and Navajo Indian tribes have claimed more than 380,000 acre-feet annually from the surface flow of the Little Colorado River Basin.[6]

In grave contrast to the amounts of water claimed by the United States and the tribes under the reserved rights doctrine, the relatively meager amount of water available to satisfy these claims, not to mention the claims of other existing water users, is insufficient by several orders of magnitude. Because of the arid climate existing throughout most of Arizona, in conjunction with extensive economic development in Central Arizona, particularly in the Phoenix and Tucson areas, "[v]irtually all surface water has been appropriated."[7] Diversions from the Gila River in the

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Indian Community, No. 39-05-50060; claim of Camp Verde Indian Tribe, No. 39-05-59952; claim of United States on behalf of the Yavapai-Prescott Tribe, No. 39-05-54011; claims of the United States on behalf of the Salt River Pima-Maricopa Indian Community, Nos. 39-05-54028 and 39-L8-35088; claim of the United States on behalf of the Hualapai Indian Tribe, No. 39-05-54027; claims of the Gila River Indian Community, Nos. 39-L8-37360 and 39-11-05478; claim of the United States on behalf of the Gila Bend Indian Tribe, No. 39-L8-35090; claim of the United States on behalf of the Maricopa Ak Chin Indian Tribe, No. 39-L8-35089; claims of the United States on behalf of the Tohono O'Odham Indian Tribe, No. 39-L8-35091 (Florence Village), No. 39-09-74336 (Schuk Toak), No. 39-09-74335 (San Xavier), and No. 39-09-74333 (Papago Indian Community); and claim of the United States on behalf of the Pascua Yaqui Tribe, No. 39-09-74334. All claim numbers have been recorded by the Arizona Department of Water Resources. These amounts do not include claims for amounts necessary to fill new reservoirs or claims for the development and use of substantial amounts of ground water.

[6]*See* claim of the Navajo Indian Tribe, No. 39-03-91442; claim of the Hopi Indian Tribe, No. 39-03-91443. Both claim numbers have been recorded by the Arizona Department of Water Resources. These amounts do not include claims for amounts necessary to fill new reservoirs or claims for the development and use of substantial amounts of ground water.

[7]United States Geological Survey, Water Supply Paper No. 2300, *National Water Summary 1985 — Hydrologic Events and Surface Water Re-*

1984 water year, for example, totaled 1,317,000 acre-feet, representing "the entire flow from the basin."[8] With regard to the Little Colorado River, present uses of the river have overwhelmed the water supply of 179,000 acre-feet annually,[9] and, as a result, "the river has no flow at times each year."[10]

The above statistics starkly illustrate the difficulties presented by the water rights claims asserted by the United States and the tribes, which are based almost completely upon the "practicably irrigable acreage" standard, adopted by this Court in *Arizona v. California*, 373 U.S. 546 (1963) (hereinafter *Arizona I*), for the reserved rights at issue in that case.[11] Putting aside for a moment the water rights claims of non-Indian irrigators, industries and municipalities, the United States' and the tribes' claims are grossly in excess of the total available water supply. Moreover, because most Indian reservations in Arizona were created a few years prior to the development of extensive surface water use by non-Indians, the water rights associated with these reservations may be assigned dates of priority which are senior to those of most non-Indian claimants. As a result, these claimants may find themselves waiting in line

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sources, at 145. *See Report of Simon H. Rifkind*, Special Master, *Arizona v. California*, No. 8 Original, Dec. 5, 1960 (hereinafter *Rifkind Report*), finding of fact no. 10, at 337 ("The Gila River, San Francisco River, and San Simon Creek are overappropriated, supply being insufficient to satisfy existing needs.").

[8]United States Geological Survey Paper, *supra* note 7, at 146.

[9]This amount is taken from an estimate by the United States Department of Agriculture, Soil Conservation Service, of the average annual flow of the Little Colorado River at Cameron Station, Arizona. *See* Soil Conservation Service, U.S. Dep't of Agriculture, *Report on Water Use in the Little Colorado River Basin*, at 5-17 (Dec. 1981).

[10]United States Geological Survey Paper, *supra* note 7, at 146.

[11]Indeed, over 94% of the total amount of water claimed by the tribes is based upon the "PIA" standard of quantification. *See* claims of the tribes, *supra* notes 5 and 6.

behind the insatiable demands of the tribes, with no water left to meet even a fraction of their needs.

For these reasons, the District and other non-Indian claimants in the Gila and Little Colorado adjudications are vitally interested in this Court's decision regarding the unbridled use of the practicably irrigable acreage standard for quantifying the water rights of Indian tribes. To the extent that such water is not necessary to meet the tribes' actual needs, and in the face of the manifest needs of non-Indian appropriators, an award to the tribes in an amount necessary to sustain all of the practicably irrigable acreage on their reservations, not to mention uses of water for other purposes, would be both improvident and unjust.

PARTY SUPPORTED

The District supports the position of the petitioner, State of Wyoming, that in the absence of any demonstrated necessity for additional water to fulfill reservation purposes and in the presence of substantial state water rights long in use on the reservation, a reserved water right may not be implied for all practicably irrigable lands within a reservation set aside for a specific tribe.

SUMMARY OF ARGUMENT

Quantification of federal reserved water rights for Indian reservations should promote tribal self-determination and economic independence by awarding the amount of water necessary for optimal utilization of a particular tribe's resources, with sensitivity to potential impacts on existing users and regional economies.[12] Tribal self-determination

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[12]The concept of optimal utilization of a tribe's natural and human resources does not refer to maximum economic output on Indian reservations, but rather to an attainable mix of uses, based upon that tribe's particular circumstances, which achieves the highest and best socioeconomic benefits for reservation Indians, consistent with cultural traditions

and economic independence, which are primary goals of Indian tribes and federal policy, are closely interrelated. Quantification decisions should therefore be closely linked to economic activities best suited for achieving tribal self-sufficiency, but be formulated with equity and realism.

No absolute standard of quantification of federal reserved rights for Indians is universally appropriate for all Indian reservations. Tribal potential for achieving economic independence depends upon a reservation's natural resources, location, climate and numerous other factors which vary widely from one reservation to another. The off-reservation impacts of quantification decisions also vary considerably from one area to another, depending upon local and regional conditions. Water awards must be carefully tailored to fit all of the circumstances relating to a particular reservation.

Practicably irrigable acreage ("PIA") is generally an inappropriate standard of quantification, particularly for Indian reservations claiming water from over-appropriated stream systems. PIA is a mechanical yardstick which awards water based solely upon the economic feasibility of a single activity, giving no consideration to actual needs of reservation residents or impacts on others.

Instead of searching for a universally applicable but mechanically applied measure of Indian water, this Court should establish broad guidelines for quantifying federal reserved rights, delegating to the lower courts in the first instance the task of applying the principles in particular fact situations. Quantification decisions which provide for optimal reservation development while minimizing impacts on established uses require careful consideration of competing factors, a process requiring thorough familiarity with the

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and values and with wise use of scarce natural resources. Comprehensive plans for developing tribal resources have been prepared by or on behalf of a number of Indian tribes. *See, e.g.*, The San Carlos Apache Tribe, *Overall Economic Development Plan* (1978); The Planning Support Group, Bureau of Indian Affairs, Report No. 255 (rev. 1977).

facts, honed by adversarial proceedings which generally have immense stakes for all parties. The competing considerations include a reservation's specific purpose, if discernible; the reservation's population and other circumstances relating to actual needs of its residents; the particular tribe's resources and other conditions bearing upon the potential for generating jobs and income on the reservation; other sources of water for the reservation; the tribe's cultural values and traditions; efficient use of a scarce and precious resource; and impacts on existing users and regional economies dependent upon a fully appropriated stream system.

Compared to Indian water awards based upon the PIA standard, the approach urged by this amicus curiae will generally produce greater economic benefits for reservation residents, yet require less water and therefore have less effect on existing users.[13] Our approach will also result in greater progress toward the goals of tribal self-sufficiency and self-determination.

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[13]Modern agriculture does little to generate employment and income for Indians. Jorgensen, *A Century of Political Economic Effects on American Indian Society, 1880-1980*, 6 JOURNAL OF ETHNIC STUDIES, No. 3, at 49 (1978); Bee, THE POLITICS OF AMERICAN INDIAN POLICY 28 (1982). Irrigated agriculture supports .005 employees per acre foot of water. U.S. Dep't of Agriculture, *Irrigation in the United States* (1985); U.S. Bureau of the Census, Census of Agriculture, Selected States (1984). One acre foot of water per year can support two to sixty employees in manufacturing industries, and even greater employment in other nonagricultural industries. Institute of Water Resources, Water Resources Support Center, U.S. Army Corps of Engineers, *IWR-Main, Water Forecasting System, Version 5.1, User's Manual and System Description*, Appendix A (June 1988). In other words, from 400 to 12,000 nonagricultural employees could be supported by the amount of water needed to generate one agricultural job.

Similarly, there are "wide variations in the value of water in different uses". National Research Council, National Academy of Sciences, *Water and Choice in the Colorado Basin: An Example of Alternatives in Water Management*, Publication 1689, at 72 (1968). In Arizona, for instance, various nonagricultural sectors generate personal income "ranging from 20 to nearly 1,000 times as large," per acre-foot of water, "as even high-value intensive cropping." *Id.*

ARGUMENT

I.

QUANTIFICATION OF FEDERAL RESERVED WATER RIGHTS SHOULD BE GEARED TOWARD ATTAINING TRIBAL SELF-DETERMINATION AND ECONOMIC INDEPENDENCE WHILE MINIMIZING ADVERSE EFFECTS ON EXISTING NON-INDIAN USES.

Both Congress and this Court have recognized tribal self-determination as a primary goal of federal Indian policy. *National Farmers Union Insurance Companies v. Crow Tribe of Indians*, 471 U.S. 845 (1985). Indian tribes are also firmly committed to self-determination as one of their main objectives. *See New Mexico v. Mescalero Apache Tribe*, 462 U.S. 324, 335 (1983).

The objective of furthering tribal self-determination includes the "overriding goal of encouraging 'tribal self-sufficiency and economic development.' " *Mescalero Apache Tribe*, 462 U.S. at 335 (quoting *White Mountain Apache Tribe v. Bracker*, 448 U.S. 136, 143 (1980)). Self-determination and economic independence are inexorably linked:

> Without a stronger economic base, the residents of Indian reservations are left dependent on the Federal government for their income and support. The well being of tribal members will be subject to the shifting political trends in Federal budgetary and Indian policy. The history of Indian affairs also suggests that a state of dependency could have adverse consequences for the self esteem, motivation, level of entrepreneurship, and other elements of the social environment of many reservations.[14]

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[14]U.S. Department of the Interior, *Report of the Task Force on Indian Economic Development* 32 (1986) (hereinafter *Task Force Report*).

True tribal self-determination can only occur when a tribe has achieved economic independence. *See Task Force Report, supra* note 14, at 78, 90-91. Thus, attaining the goal of tribal self-determination requires successful economic development on Indian reservations.

A primary emphasis of any plan for reservation development must be economic activities which generate employment and income on the reservation. Virtually every reservation in the western United States suffers from high unemployment, pervasive poverty and heavy dependence on federal handouts. *See Task Force Report, supra* note 14, at 44-50.[15] The federal government's payments to reservation Indians from 1982-1985 totaled approximately three billion dollars each year, not including social security, food stamps and state welfare payments made with federal dollars. *Id.* at 87-90.

Both sound economic principles and sound public policy dictate that quantification of federal reserved water rights should be designed to promote the goals of tribal self-determination and economic independence. In quantifying the water rights of any particular Indian reservation, one of the principal criteria should be the amount of water required to achieve optimal development of that reservation's resources. The concept of optimality contemplates a realistic, objective assessment of the mix of uses which would be most appropriate for a particular tribe, considering its needs, resources and opportunities. An expected benefit/cost ratio greater than one would be a necessary — but insufficient — condition for proceeding with a particular use. Other considerations must include the number of jobs and amount of income for reservation Indians expected to

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[15]As of 1980, unemployment levels on Indian reservations were more than twice the overall national rate; only 36% of reservation Indian males between the ages of 30 and 54 were employed, compared with 89% of all U.S. males in the same age category; and 41% of reservation Indians were living below the poverty level. *Id.* at 45, 49.

be generated by the proposed activity,[16] whether comparable benefits would flow from less water-intensive uses,[17] and the compatibility of the proposed use with tribal desires and cultural values.[18] Water awards which are linked to optimal utilization will fulfill the general intent of Congress in establishing Indian reservations, an intent to provide a homeland for Indians, reserving sufficient water "to provide the Indians with a livelihood — that is to say, a moderate living." *Washington v. Washington State Commercial Passenger Fishing Vessel Association*, 443 U.S. 658, 686 (1979) (hereinafter *Fishing Vessel*).[19]

Quantification decisions cannot be made by turning a blind eye to existing, competing economies; they must be

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[16]*See supra* note 13.

[17]*See supra* note 13.

[18]It is questionable whether any economic endeavor on an Indian reservation could be successful if it were incompatible with the value systems and goals of the tribal culture. Some Indian scholars assert that Indians hold distinctly different values regarding wealth, family and land than do non-Indians. *See* DuBray, *American Indian Values: Critical Factor in Case Work*, 66 SOCIAL CASE WORK, No. 1, at 30-37 (1985); Jarvenpa, *The Political Economy and Political Ethnicity of American Indian Adaptions and Identities*, in 8 ETHNIC AND RACIAL STUDIES, No. 1, at 29-48 (1985); A. Sorkin, THE URBAN AMERICAN INDIAN 125-136 (1978). While non-Indian goals include maximization of economic returns and accumulation of wealth for the individual, tribes often place greater importance upon such goals as extending tribal employment opportunities. *See* Sorkin, *supra*, at 125; Bean, *Morongo Indian Reservation: A Century of Adaptive Strategies*, in AMERICAN INDIAN ECONOMIC DEVELOPMENT 160 (S. Stanley ed. 1978). A recent study of three reservations concluded that small-scale tribally operated economic activity of a labor-intensive nature may ultimately be the successful mode of economic development. *See* Vinje, *Cultural Values and Economic Development on Reservations*, in AMERICAN INDIAN POLICY IN THE TWENTIETH CENTURY 155, 172 (V. Deloria, Jr. ed. 1985).

[19]The Court has made clear that the amount of water required to achieve a moderate living serves as a cap on any quantification of a federal reserved water right. *See Fishing Vessel*, 443 U.S. at 686; *United States v. New Mexico*, 438 U.S. 696, 699-700 (1978).

made with sensitivity to the impact on established uses. In quantifying reserved water rights for national forests, this Court stated:

> When . . . a river is fully appropriated, federal reserved water rights will frequently require a gallon-for-gallon reduction in the amount of water available for water-needy state and private appropriators. This reality has not escaped the attention of Congress and must be weighed in determining what, if any, water Congress reserved for use in the national forests.

United States v. New Mexico, 438 U.S. at 705. Justice Powell's dissent agreed that "the implied-reservation doctrine should be applied with sensitivity to its impact upon those who have obtained water rights under state law and to Congress' general policy of deference to state water law." *Id.* at 718 (Powell, J., dissenting in part).

The Court's observations are directly applicable to the general adjudications pending in Arizona; the Indian reserved rights claims far exceed the flow of the rivers, which for many decades have been fully appropriated by Indians and non-Indians. A large award to Indian tribes could cause extensive uncompensated losses for existing users, wreck havoc on the regional economy, and preclude future growth.[20] Significantly, because only 25% of all Indians live

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[20]It might be possible, in the short run, to partially compensate for the loss of water awarded to Indian tribes by pumping an increased quantity of groundwater. However, in many areas of Arizona withdrawal of groundwater "is greatly in excess of the safe annual yield," ARIZ. REV. STAT. ANN. § 45-401.A (1987), necessitating a strict program for limiting pumping in order to achieve and maintain a balance between the amount withdrawn and the amount of recharge. *See, e.g.*, ARIZ. REV. STAT. ANN. §§ 45-437, 45-452, 45-561 to 45-569 (1987 & Supp. 1988). A strong groundwater management statute was required by the federal government as a condition for proceeding with the Central Arizona Project, a multibillion dollar system for transporting water from the Colorado River to thirsty Indian and non-Indian users in central and

on reservations,[21] many Indians would be among the group adversely affected by tribal water awards. Moreover, the victims of a large award for some tribes could easily include Indian reservations with more recent priority dates.

The purpose of the quantification process is not to award the maximum amount of water which could be put to beneficial use on reservation land in carrying out one or more forms of development, nor is it to precipitate a massive transfer of wealth from existing users to reservation Indians. Rather, the objective of Indian water rights quantification decisions should be to promote the goal of tribal self-determination, yet provide for finality and certainty, by awarding the fixed amount of water required for realistic activities which generate the greatest economic and social benefits for reservation Indians, tempered by tribal values and a desire to minimize off-reservation impacts.

II.

INDIAN WATER AWARDS SHOULD PERMIT OPTIMAL UTILIZATION OF A PARTICULAR TRIBE'S RESOURCES, WITH SENSITIVITY TO OFF-RESERVATION IMPACTS

A. No Universal Standard of Quantification Is Appropriate; Quantification Decisions Must Be Carefully Tailored to Fit Individual Reservations.

Indian reservations reflect tremendous diversity of resources and a wide disparity in their potential for making progress toward achieving economic independence. *See Task Force Report, supra* note 14, at 79, 99-128. In Arizona, for instance, some reservations are endowed with timber or coal, some have mountains or other features attractive to

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southern Arizona. *See* Kyl, *The 1980 Arizona Groundwater Management Act: From Inception to Current Constitutional Challenge*, 53 U.COLO. L.REV. 471, 480 (1982).

[21] *Task Force Report, supra* note 14, at 36, citing 1980 U.S. Census.

tourists, and some have arable land. Some are located in remote areas and are plagued by harsh climates, while others are adjacent to thriving metropolitan areas providing ready markets for tribal goods and services.

Any realistic plan for economic development of a particular Indian reservation must focus upon that reservation's natural resources, location, climate, population and other particularized circumstances. Because of the broad diversity among reservations, suitable economic development plans will also vary considerably from one reservation to another. Logging and tourism may be the predominant economic activities best suited to one reservation, while manufacturing and commercial development may be far more appropriate for another tribe. Existing uses already reflect, in many instances, the differing resources and opportunities of various reservations.[22]

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[22]*See California v. Cabazon Band of Mission Indians*, 480 U.S. 202, __, 107 S.Ct. 1083, 1086 (1987) (tribal bingo enterprises); *New Mexico v. Mescalero Apache Tribe*, 462 U.S. at 327 (resort complex, timber, hunting and fishing); *White Mountain Apache Tribe v. Bracker*, 448 U.S. at 138 (1980) (timber operations, "accounting for over 90% of the tribe's annual profits"); *Fishing Vessel*, 443 U.S. at 664 (1979) (commercial fishing); *Mescalero Apache Tribe v. Jones*, 411 U.S. 145, 146 (1973) (cross-country ski trails); *Kerr-McGee Corp. v. Navajo Tribe of Indians*, 731 F.2d 597, 598 (9th Cir. 1984), *aff'd*, 471 U.S. 195 (1985)(uranium, oil and gas); *Yavapai-Prescott Indian Tribe v. Watt*, 707 F.2d 1072, 1073 (9th Cir.), *cert. denied*, 464 U.S. 1017 (1983) (lease of city lot for use as automobile dealership); *White Mountain Apache Tribe v. State of Arizona, Department of Game and Fish*, 649 F.2d 1274, 1277 (9th Cir. 1981) (sale of "tribal hunting and fishing licenses, ... food, lodging and tourist goods and services"); *Peabody Coal Co. v. The Navajo Tribe*, No. CIV 88-0931 PCT RGS (D.Ariz.) (coal on Navajo and Hopi reservations). The Salt River Pima-Maricopa Indian Community, which adjoins Scottsdale, Arizona, owns and operates one of the largest sand and gravel operations in the United States and one of two cement plants in Arizona. *See also Task Force Report, supra* note 14, at 134-137, 141-142, 146-155; *Indian Tribes, Incorporated*, NEWSWEEK, Dec. 5, 1988, at 40-41; *The Industrial Reservation*, NATION'S BUSINESS, Aug. 1981, at 54-58.

We are not suggesting that with proper planning, reservations can suddenly and magically become economically self-sufficient, lowering the unemployment and poverty rates to the national averages and eliminating the need for federal subsidies. Most Indians were placed on lands that "were not considered to be located in the most desirable area of the Nation." *Arizona I*, 373 U.S. at 598. Some reservations, having very limited natural resources and a poor location, have little opportunity to achieve economic independence. Much better prospects for making substantial progress toward self-sufficiency are presented by tribes which, perhaps due more to happenstance than federal planning, have extensive minerals or other natural resources and are located near metropolitan areas. The point is that any tribe's economic development plan should seek to achieve the mix of uses which is most appropriate for that tribe in view of its particular circumstances.

The water quantification process, in turn, must determine the amount of water which would be required by a particular tribe in order to implement a realistic, detailed plan for optimal utilization of its resources. Indian water awards should not be based upon an assumption that more is better, but rather should be closely tailored to fit the particular resources and all other circumstances of individual reservations.

In determining the quantity of water required to achieve optimal utilization of a particular reservation's resources, consideration must necessarily be given to the tribe's actual needs. Water is not an end in itself, but merely a means to develop tribal resources in order to further the goals of self-determination and economic independence by providing reservation Indians with a livelihood. Quantification decisions which ignore a tribe's actual needs will inevitably miss the target of achieving optimal utilization of the tribe's resources.

Prior decisions of this Court have identified actual need as an integral component of reserved rights analysis. *Cap-*

paert v. United States, 426 U.S. 128 (1976), emphasized that the quantification of reserved water rights must be limited to "that amount of water necessary to fulfill the purpose of the reservation, no more," and must be "tailored ... to minimal need". *Id.* at 141. Similarly, the Court stated in *Fishing Vessel* that water awards to Indians are to assure "that the Indians' reasonable livelihood needs would be met." 443 U.S. at 685.

We agree with the State of Wyoming that it is inappropriate to award a quantity of water which exceeds the amount required to satisfy tribal needs. Since the objective of federal policy is to meet the reasonable livelihood needs of reservation Indians, water awards must necessarily be closely tied to the size and circumstances of the reservation population. The reserved rights doctrine is premised upon the assumption that in creating Indian reservations Congress intended to reserve sufficient unappropriated water "to make the reservation livable." *Arizona I*, 373 U.S. at 599.

We also agree with Wyoming that prior congressional actions must be considered in assessing a reservation's needs and the intended source of water for filling those needs. The record in this case reflects that Congress provided for tribal acquisition of water rights under state law for more than 70% of the lands for which federal reserved water rights were awarded in the courts below. *See* Wyo. Exs. WRIR PW-2, SR-5. It also reflects that Congress rebuffed requests to create an express reserved water right for the Wind River Reservation. *See* Wyo. Exs. WRIR I&P 225, 234-235, 14.[23]

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[23]An analogous situation is presented in one of the adjudications to which this amicus is a party. The Gila River Indian Reservation participates in the San Carlos Irrigation Project, *see* 43 Stat. 475 (1924), and has also received an allocation of Colorado River water from the Central Arizona Project, *see* 48 Fed. Reg. 12446-12447 (1983). The Salt River Pima-Maricopa Indian Community holds a decreed right under state law, *see Hurley v. Abbott* (Ariz. Territorial Court, Cause No. 4564, decree filed

Courts should examine congressional treatment of a particular reservation to determine whether provision of water from another source was intended to be a partial satisfaction of tribal reserved rights rather than to supplement the amount originally reserved. At a minimum, all of a tribe's sources of water must be considered in determining whether a tribe's needs have been met and what additional quantity, if any, is needed to permit optimal utilization of the tribe's resources.

B. Potential Off-Reservation Impacts of Indian Water Awards Depend Upon Local and Regional Conditions.

A quantification decision's potential off-reservation impacts depend upon a variety of circumstances, such as the size of the award, the rate at which the tribe puts additional water to use, the availability of alternative water sources, the priorities of off-reservation water users, and the complexity of the regional economy. The award of Colorado River water to Arizona Indian tribes in *Arizona I* did not displace any existing uses in Arizona, and therefore did not interfere with reasonable, investment-backed expectations.[24] The Gila River and Little Colorado River adjudica-

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March 10, 1910); has a CAP allocation, *see* 48 Fed. Reg. 12446-12447; and receives water from the Salt River Project's Bartlett Reservoir on the Verde River pursuant to 39 Stat. 130 (1916). *See Rifkind Report, supra* note 7, at 43.

[24]The decree entered in *Arizona v. California* allocated 2,800,000 acre-feet to Arizona and awarded approximately 800,000 acre-feet of water to Indian reservation land located within Arizona, with the Indian water to be deducted from Arizona's share. *See Arizona v. California*, 376 U.S. 340, 342-345 (1964); *Rifkind Report, supra* note 7, at 267-269, 272, 279, 281-282. The special master found that total diversions from the Colorado River by Arizona users, including Indian reservations, were 1,239,140 acre-feet, representing less than one-half of Arizona's share. *Rifkind Report, supra*, at 127. It was physically impossible, until more than 20 years after *Arizona v. California*, to deliver the bulk of Arizona's allocation to potential users. *See* 48 Fed.Reg. 12446, 12450 (1983). Those waters were not even allocated by the Secretary of the Interior until 1983. *Id.* at 12446-12452.

tions, to which this amicus is a party, involve an entirely different situation. Many of the claimants in the Gila River adjudication, for instance, are successors to parties who received decreed rights under state law in 1910 after five years of litigation. *See* note 23, *supra*. Many of the uses on which those rights are based have been made continuously for 100 years.

Because the river systems in central Arizona are already grossly overappropriated, every drop of additional water awarded to Indian tribes for new uses will be taken from existing users. The last group of existing Arizona users to be directly affected by Indian quantification decisions would be farmers, who generally hold the water rights with the earliest priority dates under state law. Large numbers of municipal, industrial and commercial users would be among the first groups to be affected, because of their more junior priority.

C. Quantification Decisions Require Careful Consideration of Competing Interests on a Case-by-Case Basis.

In quantifying Indian water rights under the federal reserved water rights doctrine, first annouced by this Court in *Winters v. United States*, 207 U.S. 564 (1908), extreme caution and sensitivity must be exercised in order to avoid disastrous disruption of complex water law regimes as well as unconscionable frustration of long-established property expectations. The federal government actively encouraged and supported settlement and development of the semi-arid West, enacting laws, appropriating money and pursuing other policies which necessarily involved appropriation of all available water.[25] It would be illogical and unfair to force

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[25]Priority of actual beneficial usage is made the measure of water rights in all the significant Nineteenth Century federal legislation on water rights. *See, e.g.*, Act of July 26, 1866, ch. 262, 14 Stat. 251; Act of July 9, 1870, ch. 235, 16 Stat. 217; Act of March 3, 1877, ch. 107 § 1, 19 Stat. 377, 43 U.S.C. § 321 (Desert Lands Act); Reclamation Act of 1902, 32 Stat. 390.

existing appropriators to bear a disproportionate share of the cost of fulfilling the national responsibility to provide Indian reservations with additional water.

The need to carefully tailor each quantification decision to fit the particularized circumstances of a given reservation, with utmost sensitivity to off-reservation impacts, precludes a rigid, universal standard of quantification. Quantification decisions which provide for optimal development of a particular reservation's resources while minimizing effects on established uses require Solomonic balancing of a myriad of factors. Agonizing choices must be made. No test defined for resolving the pending case should be rotely applied to all pending and future adjudications.

The preferred approach is for the court to establish broad guidelines for quantifying federal reserved rights, permitting special masters and trial judges to apply those principles to specific facts, developed in adversarial proceedings. If Indian water rights are allegedly abridged by lower courts, this Court has already agreed to provide "a particularized and exacting scrutiny". *Arizona v. San Carlos Apache Tribe of Arizona*, 463 U.S. 545, 571 (1983).[26]

D. Practicably Irrigable Acreage Is Generally an Inappropriate Standard of Quantification.

In using practicably irrigable acreage ("PIA") as the standard for quantification in *Arizona v. California*, the Court concluded that "the only feasible and fair way by which reserved water for the reservations can be measured is irrigable acreage." 373 U.S. at 601. However, the Court

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[26]For years, Congress and the executive branch have wrestled with the problem of how to provide adequate water supplies to Indian tribes while minimizing off-reservation impacts. The Central Arizona Project and San Carlos project, *supra* note 23, are examples of federal programs designed to provide water to both groups, without disrupting existing economies. The Secretary of the Interior's allocation of Colorado River water, and the priority scheme for handling shortages, also reflect an effort to be sensitive to off-reservation impacts. *See* 48 Fed.Reg. 12446-12452.

did not purport to adopt PIA as a universal standard applicable to all Indian reservations. *See id.* at 600-601. More importantly, the PIA test suffers from a number of serious deficiencies which should preclude its usage as a general standard of quantification.

PIA is a mechanical standard which focuses solely upon economic feasibility of irrigated agriculture on particular tribal parcels, ignoring the actual needs of reservation residents. As noted by the Wyoming Supreme Court in the case before this Court, the determination is based upon arability, engineering feasibility and economics. *See* 753 P.2d at 101-105. Accordingly, if a particular reservation has a favorable climate and a large expanse of flat, fertile, well-drained land bordering a river, it will receive a large PIA award, regardless of the population of the reservation or any other considerations relating to actual need. The size of a PIA award can span the spectrum from *no* water at all to *all* of the water in the river system.[27] Because the PIA standard is unrelated to the needs of reservation residents, it is virtually guaranteed to award either too much water or too little water. Either result frustrates federal policy and creates serious inequities.

A second major failing of the PIA standard is that it promotes an activity — tribal irrigated agriculture — which is contrary to modern needs and realities. Modern agriculture already suffers from severe overproduction.[28] Expansion of tribal irrigated agriculture would require massive

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[27]In a recent New Mexico decision, the court awarded no water under the PIA standard, concluding that the United States and Mescalero Apache Tribe failed to meet their burden of proof. *State of New Mexico ex rel. Reynolds v. Lewis*, Chaves County, New Mexico, Cause Nos. 20294 and 22600, consolidated. The PIA standard also induces claimants of reserved rights to assert inflated claims premised upon unrealistic farming scenarios not intended to be implemented.

[28]"The U.S. agricultural sector throughout the 1980s has been beset by problems of insufficient demand and excess supply. In order to try to hold up farm prices, the Federal government has poured many billions of

federal appropriations for storage and diversion facilities, canals, land preparation and other prerequisites to profitable farming. Increased Indian agriculture would also constitute an inefficient use of a scarce resource. There are more important needs for water, both on the reservation and off, than increased amounts of irrigated agriculture.[29]

In addition to being water intensive (*see* note 13, *supra*), modern irrigated agriculture does little to generate employment and income for Indians.[30] As a result, it fails to solve the most pressing economic problems of reservation Indians and offers little progress toward the goals of self-sufficiency and self-determination. "In short, agriculture offers little promise of making any substantial new contributions over the next few years to Indian economic development." *Task Force Report, supra* note 14, at 120.

In many instances, agriculture is also contrary to tribal desires and aspirations.[31] As previously discussed, reservation development should be consistent with tribal values and wishes.[32]

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dollars into supporting these prices." *Task Force Report, supra* note 14, at 120.

[29]"The U.S. as a whole today needs less land in food production, not more." *Task Force Report, supra* note 14, at 120.

[30]*See* note 13, *supra*. The trend of reservation employment is away from irrigated agriculture. The percentage of Indians employed in agriculture declined from approximately 68% in 1940 to 8% in 1980, while employment in non-farming occupations increased from 32% to 92% during that time period. A. Sorkin, *The Economic Basis of Indian Life*, ANNALS, AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE 4 (March 1978); Haberfeld and Musnick, *Indian Economic Development Resources: A Question of Use, Organization and Control as Much as One of Quantity*, ECONOMIC DEVELOPMENT AND LAW CENTER REPORT 11 (Jan./Feb. 1980).

[31]Sorkin, *supra* note 18, at 2; Burrill, *The Establishment of Ranching on the Osage Indian Reservation*, 62 GEOGRAPHICAL REVIEW, No. 4, at 524-543 (1972).

[32]*See supra* notes 12, 18.

Another serious shortcoming of the PIA standard is that at best, irrigated agriculture is only one component of a realistic plan for achieving tribal economic independence. Agricultural development alone is simply incapable of generating the needed economic activity required for producing a significant improvement of economic well-being on Indian reservations.[33]

The PIA standard is also insensitive to impacts on existing users. It makes no effort to minimize those effects by focusing on forms of development which generate the most economic benefits for the least amount of water.

CONCLUSION

Although practicably irrigable acreage may have been an appropriate standard for quantifying the federal reserved water rights of the Indian reservations involved in *Arizona v. California*, it would generally be improvident and unjust to apply it to other reservations today. The PIA standard ignores the actual needs of reservation Indians and of the national economy, focuses on a water-intensive activity which results in little progress toward tribal self-sufficiency, and is insensitive to consequences for other users.

As an alternative to the PIA approach, courts should tailor each quantification decision to fit the reservation's resources and other circumstances, basing an Indian water award upon the mix of uses that is designed to provide the greatest socioeconomic benefits for reservation Indians

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[33]Haberfeld and Musnick, *supra* note 30, at 11.

while making wise use of a scarce resource and minimizing impacts on other users.

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